

Practical Steps to Ensure Your Dairy is Politically and Environmentally Righteous

Joe Zink

Colpitts Ranches, 25165 B, Township Road 242, Calgary, Alberta T3Z 3K2
Email: zink@colpittsranches.com

■ Take Home Messages

- ▶ Dairy farmers comprise a significant and prosperous sector of Canadian agriculture and therefore need to take responsibility for their past errors and proceed to make restitution.
- ▶ Climate change and social justice issues are an immediate threat to agriculture, the environment and civil order throughout the world; we are well off but we will not escape these impacts.
- ▶ On the environmental front we need to transform our farms to pollution-free, sustainable, energy efficient oases that extract the minimum from the environment yet contribute to soil health and ecological diversity.
- ▶ The direction we are heading with standards of animal husbandry abrogates our moral responsibility to provide dairy cattle with comfortable space, access to their natural environment and sympathetic interaction with humans.
- ▶ Dairy farmers must become radically political to pressure for environmental protection.
- ▶ In the international arena, we should lead by example with the transfer of appropriate technology and employment opportunities for developing nations.

■ The Environmental Responsibility of Dairy Farmers

“We probably could have saved ourselves, but we were too damned lazy to try very hard ... and too damned cheap.” (Kurt Vonnegut)

In 2005 the Intergovernmental Panel on Climate Change documented the extent of global warming caused by the increase of atmospheric CO₂. Regardless of denial campaigns funded by carbon polluting industries, their findings have been accepted by the national academies of science in the United States, the United Kingdom, Canada, China, India, Russia, France, Italy, Germany and Japan.

All IPCC reports are available from <http://www.ipcc.ch>

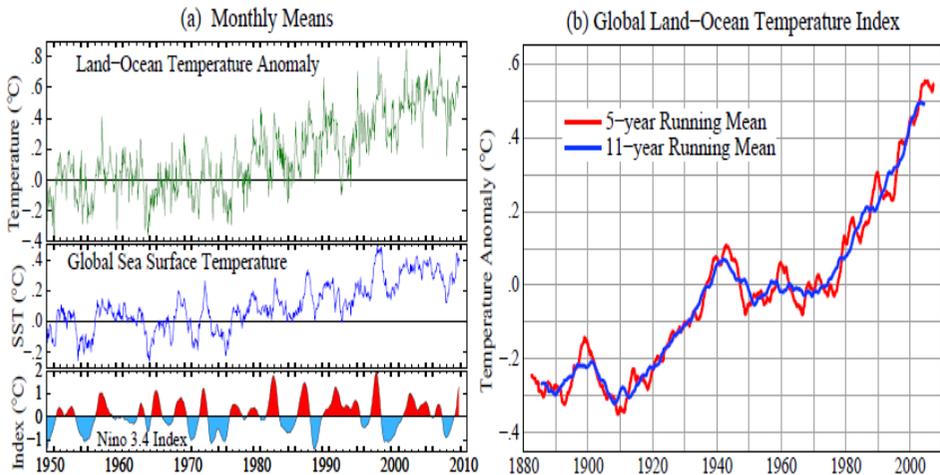


Figure 1. The Temperature of Science. (Hansen, 2009)

Relative to other agricultural sectors, dairy farmers have enjoyed some level of prosperity over the past decades. But, as beneficiaries of widespread resource extraction in the developed world, we have accumulated a large carbon debt; the consequences of which will need to be repaid by future generations. A sustainable level of carbon dioxide emission is 1.2 tonne/capita/year. Our current Canadian emission rate is 19.05 tonne/capita/year (Monbiot, 2006). If we do not join other nations in taking exceptional measures to reduce this rate, we can expect that the predicted consequences of global warming will emerge; including:

- ▶ The impact of climate change will cause northern coastal areas to experience colder winter conditions as a result of the disruption of ocean currents such as the Gulf Stream. Inland continental masses will experience drier, hotter summer conditions. In all areas, extreme weather events will increase. Already their incidence has quintupled since the 1950's (Schmidt, 2009)
- ▶ About one-third of human society will be affected by drought and water scarcity. A half meter rise of sea levels will flood coastal areas, contaminate drinking water with salt and seriously damage major cities in

many nations.

- ▶ By 2050, 15 to 37% of the world's species will be extinct. Ocean coral reefs will bleach as the ocean acidifies and no longer provide a critical habitat for many marine species. The Amazon basin will dry up and likely burn.
- ▶ Agricultural production will be greatly reduced by drought and extreme weather events (Gore, 2006). Because agriculture is already marginal in so many parts of the world, the UN Food and Agriculture Organization warns that about 2 billion persons will face starvation due to inadequate crop production and poverty. Many more will be malnourished. A greater incidence of crop and livestock diseases will compound these problems. In North America the high cost of grain will preclude its use in livestock diets.
- ▶ The economic impacts of climate change will include mass migration and widespread civil disorder.
- ▶ The worst prospect is a self-perpetuating and irrevocable release of carbon dioxide. As temperatures warm, the arctic tundra, tropical forests and even soils in temperate regions will become net contributors to atmospheric CO₂ - initiating a positive feedback loop that will inevitably transform the planet as we have known it (Gore, 2009).

To prevent or ameliorate this bleak future, dairy farmers need to adjust their personal lives and agricultural activities. Also, we are leaders. We have the resources and we are able to set an example for others in the community. But what to do?

Reduce Energy Usage

Dairymen know how to use DHI data to make progress and that same manipulation of knowledge can be utilized to reduce energy consumption. Use programmable thermostats and smart power monitoring devices (Google Powermeter) to monitor consumption. Identify problem areas and take corrective action by insulating buildings, installing more efficient furnaces and purchasing geothermal heat pumps or solar heaters.

Reconsider your personal transportation and downsize your cars, trucks and tractors. Implement better preventative maintenance so that vehicles operate efficiently. Buy bicycles for the wife and kids. Avoid unnecessary air travel and other forms of "retail therapy" (Suzuki, 1998). Stay home.

Rethink Your Agricultural Practices

The two most significant changes that a farmer can make to reduce the carbon footprint of his/her agricultural operations are to reduce the use of diesel fuel and nitrogen fertilizer. This may seem a daunting task but progress can be made with 'baby steps'. Re-evaluate your traditional cropping practices.

Calculate the diesel consumption of your field operations and the efficiency of your tractors. Reconsider your crop plan to utilize legumes such as peas or alfalfa for co-cropping to reduce your use of nitrogen fertilizer. Keep in mind that your cost for crop inputs is not the true cost that will be borne by future generations. Shift your dairy ration so that it includes more forage and less grain or processed components. Use soil tests and calculate your manure application accordingly. Treat manure as a resource rather than a nuisance and send it out to distant fields that need it. Cast aside your preconceptions and consider whether some "organic" practices might be used to reduce your energy footprint.

Pollution, Permaculture & Pasture:

Dairy farmers own and manage a very important part of the natural habitat in western Canada. Ecologically, farmland is just as important as the spaces reserved for provincial and national parks. Every dairy farmer should plant trees, establish shelterbelts and set-aside marginal land to protect it from disturbance by cattle. Implement Silviculture in the north and Permaculture in the south. Utilize electric fencing technology for controlled pasture grazing and control pollution as if you care!

■ The Welfare of Dairy Cattle - our Fabricated Creations

With centuries of selective breeding we have created the modern dairy cow from its primitive ancestor (Caras, 1997). As a creature of our creation and confinement we are responsible for their care. Some issues that need attention are:

- ▶ Transportation Laws need to be harmonized between provinces and countries with respect to duration of transit. For dairy cattle, this should be reduced from 52 hours to 9 as in Europe. The clock should not be reset whenever a border is crossed or when cattle are unloaded. Dairy cattle do not suit the design of cattle liners.
- ▶ Tie stall barns will soon fade away mainly for economic reasons but also

because they cannot accommodate technology or provide adequate cow comfort. But the transition to free stall designs replaces intimacy with detachment. Free stall designs still require improvement but access to outdoor space is a convenient, though rare, remedy. Dry cows and replacement heifers should be raised in a pasture environment rather than feed lot.

- ▶ The incidence of disease and replacement rate of dairy cattle is unacceptably high. We have bred and selected dairy cattle for our own standards of beauty rather than for disease resistance, or criteria such as polled genes.

■ Political Restitution

As much as individual initiatives are vital, political action is required to implement the great paradigm shift that is required to avoid a future of environmental chaos. Action at every political level is required. Every delegate election of Alberta Milk should be hotly contested. Those delegates should quickly develop programs that direct producers to reduce their carbon footprint. Politicians at every level of government need to be committed to redirecting our attention, our technology and our financial resources to action on energy transition and climate change. That will only happen if they are engaged at every opportunity by citizens who argue that environmental issues, beyond all others, are of paramount importance.

As we take these actions in the developed world, we somehow need to convince developing nations that they too need to change their patterns of deforestation, agriculture and industrial development. No matter that we have exploited them for centuries; their future is just as much in peril. Also, when developed countries take military action against agrarian countries it's inevitable that the agricultural infrastructure suffers serious damage. Unless there is a purposeful, well-financed effort at reconstruction, it can take generations for agriculture to recover.

Prior to the Soviet Afghan war 30 years ago, Afghanistan had a flourishing agricultural export trade of high-value products such as dried fruit and nuts that were mainly sold to India. During that war virtually all of their agricultural storage facilities, all of their irrigation infrastructure and related industrial equipment was destroyed; not to mention that 1 million Afghans were killed and 1.2 million disabled.

A few years later Nicaragua, another agrarian country, was subject to similar devastation. After enduring decades of brutal repression by a sadistic dictator supported by the United States, a popular revolution occurred and a democratic government was achieved at the cost of more than 40,000 Nicaraguan lives. Refusing to accept defeat, the Americans hired thugs to

infiltrate the rural areas and destroy virtually all that remained of the agricultural infrastructure – most importantly the coffee and cotton processing equipment (Collins, 1982).

Because our military, political and industrial systems are intimately integrated with those of the USA and their other allies, these crimes are partly our responsibility and restitution is required. In the simplest form that could involve contributions to aid agencies that assist farmers in the developing world. For example:

- ▶ Farm Radio International
- ▶ Canadian Foodgrains Bank
- ▶ Farmer to Farmer – Partners of the Americas (dairy)
- ▶ Heifer International
- ▶ Kiva



There are also many opportunities to work as a volunteer. Alternately or in addition, almost any dairy farm could benefit from hiring a temporary foreign worker. Check out "Farm Labour" on the Alberta Milk website.

■ References

- Caras, Roger. A. A Perfect Harmony - The Intertwining Lives of Animals and Humans throughout History. Simon & Schuster, 1997. ISBN 0-684-81100-6
- Collins, Joseph. Nicaragua: What Difference Could a Revolution Make? Grove Press. 1982. ISBN 0-394-55625-9
- Gore, Al. An Inconvenient Truth. Rodale Press. 2008 ISBN 13-978-1-59486-567-1
- Gore, Al. Our Choice. Rodale Press. 2009 ISBN 13-978-1-59486-734-7

- Hansen, Jim. Storms of our grandchildren. Bloomsbury USA. 2009. ISBN-13: 9781608192007
- Monbiot, George. Heat: how to stop the planet from burning. Doubleday Canada. 2006. ISBN 13-978-0-385-66221-5
- Suzuki, David. Earth Time. Stoddart Publishing. Ireland 1998. ISBN 0-7737-6009-1
- Schmidt, Gavin., Wolfe, Joshua. Climate change. Picturing the science. W.W. Norton & Co. 2009. ISBN-13-978-0-393-33125-7

